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for thy good -

An Essay



on

Scilla Maritima  
or Squill By

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Georgia

No 2

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*Scilla Maritima* or Squill is a perennial bulb rooted plant, that grows naturally on the sea shore or in ditches where the salt water flows in with the tide. It flourishes and grows in the warm parts of Europe, and particularly on the sandy shores in Spain and in the Levant, from whence there is an annual supply of them.

The bulbs of this plant are the parts used in Medicine. Of these bulbs there are two kinds, the red and the white, which are supposed to be accidental varieties but for medicinal use, the red is generally preferred, as it has been supposed to be more efficacious than the other. The bulbs should be chosen large, plump, fresh and full of a clammy juice. The squill may be preserved fresh in sand, but as they are apt to spoil, it is best to keep them in a dried state.

The root of the squill is about the size of the fist, and of a pear shape, with the apex

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upwards and consists of fleshy scales attenuated at both edges, surrounded by other scales, which are arid shining, and so thin that the root at first sight appears to be tunicated.

The recent roots have scarcely any smell, but the taste is extremely acrid nauseous and bitter.

It is more commonly met with in the shops in the form of dried scales, which should be brittle, semipellucid, smooth, but marked with lines, and should when chewed, feel tenacious and bitter to the taste, without any manifest acrimony.

The most convenient way of drying the squall is, after having peeled off the outer skin, to cut the bulbs transversely into thin slices. These are to be dried on a sieve with a gentle heat.

By this method the squall dries much sooner, than when its several coats are only separated.

The internal part being here laid bare, which in each of the entire coats, is covered with a thin skin,

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The root loses in this process about four fifths of its original weight. The parts which exhale with a moderate heat, appear to be merely watery, hence six grains of the dry root are equal to half a dram of the fresh root, a circumstance to be particularly regarded in the administration of this medicine. But if too great heat has been employed to dry the squill it becomes almost inert and it also loses by long keeping in a state of powder. The medicinal properties of the squill appear to depend upon a peculiar bitter principal, which exists in them, to which Chemists have given the name of scitleton.

The properties of this substance were investigated in eighteen hundred and twelve by Vogel, who pointed out its peculiar nature and gave it the name by which it is distinguished. The method by which he obtained it is as follows. The juice of the fresh bulbs being expressed was boiled for a few minutes and a quantity of citrate of lime, which appeared

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was separated. It was then evaporated to dryness, and the dry residue digested in alcohol as long as that liquid took up any thing. The alcoholic solution was evaporated to dryness, and the residue (which consisted of scilliten and tannin) was redissolved in water. Acetate of lead was dropped in to throw down the tannin, the liquid was filtered, and the excess of lead which had been added was separated by means of a current of sulphuretted Hydrogen gas. The liquid being again filtered was evaporated to dryness to drive the acetic acid from the acetate. The dry mass was scilliten mixed with a little sugar, from which it was not in Vogel's power to separate it. Scilliten thus obtained, is white and transparent, and breaks with a resinous fracture. It is easily reduced to powder, absorbs water rapidly from the atmosphere, and becomes at first viscid mass and at last quite fluid. The taste is intensely bitter, leaving a slight

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impression of sweet, from the sugar with which it is mixed. It dissolves readily in water giving it a mucilaginous consistence like gum. It dissolves very readily in cold alcohol of 0.817 and still more readily in that liquid when hot.

The root of the squall has been known in medicine in the early ages of Greece so that the introduction of its medical use has been referred by some to Epimenides and by others to Pythagoras. It is noticed by Dioscorides, Hippocrates, Galen, Pliny and Celsus, and also by the Arabian Physicians. Its medical character has been retained ever since to such a degree, that it is still deservedly held in high estimation and frequently used. It seems, however, to manifest a poisonous quality to several animals, as medical writers have testified. If administered in large and repeated doses, it not only excites nausea, tormina and ~~violent~~ vomitings, but it has been known to produce stranguary, bloody urine,

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hypercatharsis, cardialgia, hæmorrhoids, convulsions  
with fatal inflammation, and gangrene of the stom-  
ach and bowels. Nevertheless under proper manage-  
ment and in certain cases and constitutions, fit for  
its recommendation as a medicine of great practical  
utility, and real importance, in the cure of many  
~~chronic~~ acute diseases. In small doses, it is expectorant  
and diuretic; but in large doses, it proves emetic  
and purgative. But when these latter effects take  
place, the medicine is prevented from reaching  
the blood vessels and kidneys, and the patient derives  
no benefit from its diuretic efficacy. In such cases  
it should be given in smaller doses and at longer  
intervals, or an opiate should be joined with it,  
which according to Doctor Cullen, will answer  
the same purpose. By repeated use, the dose may  
be increased, and the intervals of administering it  
diminished; and, accordingly when the doses are  
tolerably large, the opiate may be most conveniently

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employed to direct the operation of the squills, more certainly to the kidneys. In cases of dropsy, he says, where there is an effusion of water into the cavities, and, therefore, less water passes to the kidneys, neutral salt accompanying the squills, may be of use in determining it more certainly to the kidneys, and when it is perceived to take this course, he is persuaded, that it will be always useful and generally ~~useful~~ during the exhibition of the squills to increase the usual quantity of drink.

The diuretic effects of the squills have been supposed to be promoted by the addition of some mercurial, and Doctor Cullen is of opinion, that the less purgative preparations of mercury, are best adapted to this purpose. Accordingly he recommends a solution of corrosive sublimate or oxy muriate of mercury, as the most proper because it is the most diuretic. Wagner recommends the powder of squills, given with nitre, in hydropical

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mullings, and in nephritis, and mentions several  
examples of cures, which he performed by giving  
patients from four to ten grains, with a double  
quantity of nitre. When squills have been employ-  
ed as a diuretic, it has been usual to give it in pow-  
der; because, in this state, it is less apt to produce  
nausea, and it has been customary to add neutral  
salt as nitre, or cogulate of tartar, especially, if  
the patient complains of much thirst. Others rec-  
ommend calomel; and with a view to render the  
squills less offensive to the stomach, it has been  
usual to add some aromatic. In asthmatic affec-  
tions or dyspnoea, occasioned by the lodgement  
of tenacious phlegm, oppressing the lungs, or  
when the primæ viæ abound with mucous  
matter, it has been the expectorant usually  
employed, and held in high estimation.  
As an expectorant, the squill may be supposed  
not only to attenuate the mucous matter and thus

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to facilitate its expulsion, but, by stimulating the excretory organ, and mucous follicles, to excite a more copious secretion of it from the lungs and thereby lessen the congestion, upon which the difficulty of respiration very generally depends. Hence in all pulmonary affections, excepting only those of actual or violent inflammation, ulcer and spasm, the squill has been found to be a very useful medicine. It is rendered more useful as an expectorant, when combined with nitrate of potash, tartarised antimony, or Ipecacuanha, and in asthma and dyspnoea, without fever, squill combined with ammoniacum is perhaps the best remedy that we can employ.

As an emetic the squill is very uncertain in its effects, producing in some persons the most cruel vomiting, and in others producing no nausea at all, even in the largest doses.

When it readily and moderately induces vomiting,

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it proves more useful in whooping cough and croup,  
than any other emetic which we can administer.

To produce an emetic effect, the squill must be  
given in the form of an infusion, in vinegar, or, what  
is still better, is a preparation which is found in  
the shops in the form of an exsymbol of squills.

The vinegar of squills has long been used as an expecto-  
rant and diuretic in chronic catarrh, asthma  
and dropsies. In large doses it proves emetic and is  
occasionally used to produce vomiting in the above  
mentioned diseases especially when the stomach  
is loaded—

A preparation of this medicine held in high esteem  
by the profession, is that combination under  
the title of hive syrup, in which this article forms  
a principal ingredient. Indeed in certain cases  
of children, as whooping cough, measles, &c  
we could find no substitute for it and very deserv-  
ingly does it maintain the reputation it

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has acquired —  
To the Professor of Materia Medica in the university  
of Pennsylvania do we owe, the discovery and  
original preparation of this Medicine.

